



Illinois Department of Transportation

Memorandum

To: ALL BRIDGE DESIGNERS 04.2

From: Ralph E. Anderson *Ralph E. Anderson*

Subject: Painting New Metal Structures with Full Shop Application

Date: January 30, 2004

Due to recent problems the Department has experienced with overcoating inorganic zinc in the shop, the full shop application of the inorganic zinc/acrylic paint system will no longer be permitted.

The problem stems from the pressure on fabricators to move items through their paint facility as fast as possible, while the inorganic zinc primer needs time to react with the humidity in the atmosphere to properly cure prior to overcoating. In addition, the tests used to determine if the inorganic zinc primer has sufficiently cured prior to overcoating are not reliable enough and subject to user error.

To accommodate instances where it is necessary or desirable to minimize field painting (e.g. over busy expressways and/or railways) a full shop-applied organic zinc/epoxy/urethane system has been adopted. The organic zinc primer does not need to react with the atmosphere, but employs a chemical reaction which allows for faster overcoating. The Districts will determine when complete shop application of the paint system is appropriate. Inorganic zinc is still preferred for overall corrosion protection but the more predictable curing of organic zinc makes the new system preferable in some instances. The Guide Bridge Special Provision GBSP 22 has been revised to reflect this change.

The following note shall be used when full shop application of the coating system is required:

"The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be _____, Munsell No. _____. See Special Provision for Cleaning and Painting New Metal Structures."

The standard note for the combined shop and field applied inorganic zinc/acrylic system, as detailed in ABD memo 02.1, shall still apply for most projects.

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